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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/532,695	04/26/2005	Heinrich Steinruecken	3270	8754

7590 12/06/2005

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103 East Neck Road  
Huntington, NY 11743

EXAMINER
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BENSON, WALTER

ART UNIT	PAPER NUMBER
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2858

DATE MAILED: 12/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/532,695

Applicant(s)

STEINRUECKEN ET AL. 

Examiner

Walter Benson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 April 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 6-12 is/are rejected.
- 7) ☐ Claim(s) 4 and 5 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 April 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 4/26/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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## **DETAILED ACTION**

1. Claims 1-12 are presented for examination.

### ***Specification***

2. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

### **Arrangement of the Specification**

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR  
DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT

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(e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A

COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or

REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a).

"Microfiche Appendices" were accepted by the Office until March 1, 2001.)

(f) BACKGROUND OF THE INVENTION.

(1) Field of the Invention.

(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.

(g) BRIEF SUMMARY OF THE INVENTION.

(h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).

(i) DETAILED DESCRIPTION OF THE INVENTION.

(j) CLAIM OR CLAIMS (commencing on a separate sheet).

(k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).

(l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

### ***Claim Objections***

3. Claim 1 objected to because of the following informalities:

i. Usually the structure of a claim will contain:

- a. Preamble section
- b. Body section
- c. Transitional section.

Claim 1, contains too many transitional words, it is unclear what is the preamble and the body of the claim (i.e. a method or diagnosis of a sensor ...).

Appropriate correction is required.

### ***Drawings***

4. The drawings are objected to because Figure 4, items 41-48, require legends. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the

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remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

6. The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

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7. Claims 1, 3, 6, and 8-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Hawkins et al. (US Patent No. 6,814, 053 B2 and Hawkins hereinafter).

8. As to claim 1, Hawkins discloses a system in a motor vehicle having an internal combustion engine [Fig. 2], comprising:

where during operation of the motor vehicle, an output signal of the sensor is monitored for whether a maximum value of the output signal undershoots a first threshold value and /or a minimum value of the output signal overshoots a second threshold value (Fig. 3; col. 6, lines 47-50);

in that case a signal is forwarded to a controller that signals to the controller that the sensor, upon restarting of the motor vehicle, might be furnishing incorrect data (col. 3, lines 47-52).

9. As to claim 3, Hawkins discloses a system in a motor vehicle having an internal combustion engine, comprising:

in that in the event of undershooting or overshooting of the threshold values, the output signals of the sensor upon restarting of the motor vehicle are initially not used for the control and/or regulation of the motor vehicle (col. 6, lines 1-6).

10. As to claim 6, Hawkins discloses a system in a motor vehicle having an internal combustion engine, comprising:

in that the signal stored in a nonvolatile memory so in the controller is that the signal will

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be directly available upon restarting of the engine (col. 4, lines 57-61).

11. As to claim 8, Hawkins discloses a system in a motor vehicle having an internal combustion engine, comprising:

in that starting of the engine in emergency operation is done without using the phase sensor (col. 6, lines 58-60).

12. As to claim 9, Hawkins discloses a system in a motor vehicle having an internal combustion engine, comprising:

in that the threshold values are stored in a permanent memory of the sensor (col. 4, lines 49-52).

13. As to claim 10, Hawkins discloses a system in a motor vehicle having an internal combustion engine, comprising:

by means of a calibration of the sensor, the threshold values are adapted (col. 5, lines 11-15).

14. As to claim 11, Hawkins discloses a system in a motor vehicle having an internal combustion engine, comprising:

in that the forwarding of the signal is done in encoded form (col. 6, lines 11-13).

15. As to claim 12, Hawkins discloses a system in a motor vehicle having an internal combustion engine, comprising:



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a sensor having means for performing the method of claim 1 (col. 4, lines 46-49).

***Claim Rejections - 35 USC § 103***

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. Claims 2 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hawkins in view of Takahashi et al. (US Patent No. 6,760,681 B2 and Takahashi hereinafter).

Although the system disclosed by Hawkins shows substantial features of the claimed invention (discussed in the paragraphs above), it fails to disclose:

the first threshold value is equal to the second threshold value [claim 2];

the sensor is a phase sensor on a camshaft of the engine [claim 7].

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by Hawkins, as evidenced by Takahashi.

Takahashi discloses a rate detection system having:

the first threshold value is equal to the second threshold value [claim 2] (Fig. 10; col. 8, lines 12-15) to provide a reference level;

the sensor is a phase sensor on a camshaft of the engine [claim 7] (60, Fig. 4; col. 6, lines 9-12).

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Given the teaching of Takahashi, a person having ordinary skill in the art at the time of the invention would have readily recognized the desirability and advantages of modifying Hawkins by employing the well known or conventional features of phase sensor technology, such as disclosed by Takahashi, in order to efficient transfer data streams in an operating region of very low engine speeds and for the purposes discussed above.

***Allowable Subject Matter***

18. Claims 4 and 5, are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art of record fails to teach in combination as claimed a sensor system including where the sensor is not used again for the control and/or regulation of the motor vehicle until calibration of the sensor has been done.


***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Walter Benson whose telephone number is (571) 272-2227. The examiner can normally be reached on Mon to Fri 6:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diane Lee can be reached on (571) 272-2399. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Walter Benson  
Patent Examiner

December 2, 2005